51
--40. (New) The method of claim 25 wherein the labeled hybridization probe comprises a fluorescent compound.--

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--41. (New) The method of claim 25 wherein the labeled hybridization probe comprises an enzyme.--

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--42. (New) The method of claim 24 wherein the nucleic acid molecule comprises a deoxyribonucleic acid molecule.--

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--43. (New) The method of claim 24 wherein the nucleic acid comprises a ribonucleic acid molecule.--

REMARKS

Following entry of this paper, claims 24, 25 and 28-43, all corresponding to Group III, will be pending in this application. Claim 24 has been amended. Claims 26 and 27 have been canceled. New claims 28-43 have been introduced. Basis for new claims 28-43 may be found at least at pages 20, 23, and 47 of the specification as originally-filed. Applicants believe that the amendments introduce no new matter.

RESTRICTION REQUIREMENT

The Office Action, pursuant to 35 U.S.C. §121, sets forth a restriction requirement requiring Applicants to elect one of the following inventions for prosecution on the merits, namely:

Invention I: Claims 24-27, in part, drawn to a method for detecting cervical cancer by detecting the presence of a nucleic acid which comprises a sequence encoding a protein having a molecular weight of about 69.4 kDa and an isoelectric point of about 5.8, classified in class 435, subclass 6.

Invention II: Claims 24-27, in part, drawn to a method for detecting cervical cancer by detecting the presence of a nucleic acid which comprises a sequence encoding a protein having a molecular weight of about 53.8 kDa and an isoelectric point of about 5.5, classified in class 435, subclass 6.

Invention III: Claims 24-27, in part, drawn to a method for detecting cervical cancer by detecting the presence of a nucleic acid which comprises a sequence

encoding a protein having a molecular weight of about 47.9 kDa and an isoelectric point of about 5.6, classified in class 435, subclass 6.

Invention IV: Claims 24-27, in part, drawn to a method for detecting cervical cancer by detecting the presence of a nucleic acid which comprises a sequence encoding a protein having a molecular weight of about 46 kDa and an isoelectric point of about 5.1, classified in class 435, subclass 6.

Invention V: Claims 24-27, in part, drawn to a method for detecting cervical cancer by detecting the presence of a nucleic acid which comprises a sequence encoding a protein having a molecular weight of about 44.9 kDa and an isoelectric point of about 6.6 kDa, classified in class 435, subclass 6.

Responsive to the Office Action, Applicants hereby elect, with traverse, Group III claims for further prosecution. In addition, Applicants have amended the claims to reflect this election. The claims, as amended, are directed to sequences identified as being related to the protein known as IEF SSP 9502 (see, Table 4).

The Examiner is invited to call the undersigned at (617) 248-7044 with any questions or comments if the Examiner believes that a telephone conversation would be helpful in expediting prosecution of the instant application.

Early favorable action is respectfully solicited.

Respectfully submitted,

Ronda P. Moore, D.V.M.

Date: December 19, 2000
Reg. No. 44,244

Ronda P. Moore, D.V.M.
Attorney for Applicants
Testa, Hurwitz, & Thibeault, LLP
High Street Tower
125 High Street
Boston, Massachusetts 02110

Tel. No.: (617) 248-7044
Fax No.: (617) 248-7100

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CLEAN COPY OF THE PENDING CLAIMS

24. A method for detecting cervical cancer in a human, comprising:

detecting the presence of a nucleic acid molecule or a sequence complementary thereto in a tissue or body fluid sample of the human, wherein the nucleic acid molecule encodes a protein having an amino acid sequence selected from the group consisting of SEQ ID NO. 1, SEQ ID NO. 2, SEQ ID NO. 3, SEQ ID NO. 4, SEQ ID NO. 5, SEQ ID NO. 6, SEQ ID NO. 7, SEQ ID NO. 8, SEQ ID NO. 9, and SEQ ID NO. 10, wherein the nucleic acid molecule, if present in the sample, is indicative of the presence of cervical cancer.

25. The method of claim 24, wherein said method comprises reacting the sample with a labeled hybridization probe capable of hybridizing specifically with at least a portion of the nucleic acid molecule.

26-27. Canceled.

28. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 1.

29. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 2.

30. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 3.

31. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 4.

32. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 5.

33. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 6.

34. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 7.

35. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 8.

36. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 9.

37. The method of claim 24 wherein the amino acid sequence is set forth in SEQ ID NO. 10.

38. The method of claim 24 wherein the sample comprises a tissue sample.

39. The method of claim 25 wherein the labeled hybridization probe comprises a radioisotope.

40. The method of claim 25 wherein the labeled hybridization probe comprises a fluorescent compound.

41. The method of claim 25 wherein the labeled hybridization probe comprises an enzyme.

42. The method of claim 24 wherein the nucleic acid molecule comprises a deoxyribonucleic acid molecule.

43. The method of claim 24 wherein the nucleic acid comprises a ribonucleic acid molecule.

MARKED UP COPY OF THE AMENDEDCLAIMS

24. (Amended) A method for detecting cervical cancer in a human, comprising:

detecting the presence of a nucleic acid molecule or a sequence complementary thereto in a tissue or body fluid sample of the human, [thereby to indicate the presence of a cervical carcinoma in the human,

wherein the nucleic acid molecule is selected from a group consisting of:

a nucleic acid molecule comprising a sequence capable of recognizing and being specifically bound by a cervical cancer-associated protein; and

a nucleic acid molecule comprising a sequence encoding a cervical cancer-associated protein;

wherein cervical cancer-associated protein is characterized as being selected from the group consisting of:

a protein having a molecular weight of about 69,400 Daltons and an isoelectric point of about 5.8;

a protein having a molecular weight of about 53,800 Daltons and an isoelectric point of about 5.5;

a protein having a molecular weight of about 47,900 Daltons and an isoelectric point of about 5.6;

a protein having a molecular weight of about 46,000 Daltons and an isoelectric point of about 5.1; and

a protein having a molecular weight of about 44,900 Daltons and an isoelectric point of about 6.6,

wherein the molecular weight is determined by standard polyacrylamide gel electrophoresis techniques and the isoelectric point is determined by standard isoelectric focusing techniques, and

wherein the cervical cancer-associated protein is further characterized as being a non-chromatin protein which is detectable at a higher level in a human cervical cancer cell

than in a normal human cervical cell, as determined by two-dimensional gel electrophoresis]

wherein the nucleic acid molecule encodes a protein having an amino acid sequence selected from the group consisting of SEQ ID NO. 1, SEQ ID NO. 2, SEQ ID NO. 3, SEQ ID NO. 4, SEQ ID NO. 5, SEQ ID NO. 6, SEQ ID NO. 7, SEQ ID NO. 8, SEQ ID NO. 9, and SEQ ID NO. 10, wherein the nucleic acid molecule, if present in the sample, is indicative of the presence of cervical cancer.

26. Canceled.

27. Canceled.